

determining a target valve stem position based on target flow rate, or adjusting a valve stem position until the position of the valve stem matches the target valve stem position, all of which are recited in claim 1.

Haines relates to a closed loop system having a controller that controls a flow rate of fluid through a valve. See Haines at col. 2, lines 5-11 and Fig. 2. Haines' controller calculates the flow rate of the fluid through the valve and then changes a direction of a valve plug to change the flow rate and to "bring it closer to a predetermined desired flow rate value." See Haines at col. 7, lines 58-64.

Haines does not describe or suggest an open loop method of controlling flow rate, as recited in claim 1. Rather, Haines describes a closed loop method in which the flow rate is calculated after the valve plug is moved. This calculated flow rate is then fed back to the controller so that the controller may adjust how much it moves the valve plug in the future. See Haines at col. 7, line 58 to col. 8, line 2 and Fig. 5.

Nor does Haines describe or suggest determining a target valve stem position based on target flow rate, as recited in claim 1. Rather, Haines' controller merely determines a direction (not a position) at which the valve plug will be moved based on a calculated (not a target) flow rate. See Haines at col. 7, line 58 to col. 8, line 2 and Fig. 5.

Additionally, Haines does not describe or suggest adjusting a valve stem position until the position of the valve stem matches the target valve stem position, as recited in claim 1. Rather, Haines' controller adjusts the valve in a particular direction until a calculated flow rate (not a position) matches a target flow rate (not a target position). See Haines at col. 7, line 58 to col. 8, line 2 and Fig. 5.

For at least these reasons, claim 1 is allowable over Haines. The claims depending from claim 1 are allowable for at least the reasons that claim 1 is allowable and for containing patentable subject matter in their own right. Independent consideration and allowance of the dependent claims are requested. For example, claim 2 recites that determining the target valve stem position includes, among other steps, calculating a flow area of the valve flow modulating member. Haines does not describe

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or suggest calculation of the flow area. As another example, claim 4 recites that determining the valve stem position includes using a predetermined relationship between the valve stem position and the flow area. Haines does not describe or suggest using a predetermined relationship between the valve stem position and the flow area.

Attached is a marked-up version of the changes being made by the current amendment.

Applicant asks that all claims be allowed. Enclosed is a \$110.00 check for the one month extension of time. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: _____

July 27, 2001

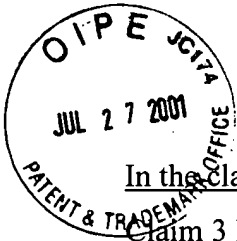
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Version with markings to show changes made

In the claims:

Claim 3 has been amended as follows.

3. (AMENDED) The method of claim 2, wherein calculating the flow area of the valve flow modulating member comprises using the [**measured**] target flow rate and the determined pressure coefficient.